INNOTRONICS CORPORATION
Brooks Road • Lincoln, Mass. 01773
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INNOVEX
Originators of the DISKETTE

MODEL 410 FLOPPY DISK DRIVE

CONSERVATIVELY DESIGNED BY THE SAME PROFESSIONALS WHO BROUGHT YOU THE FIRST DISKETTE AND DRIVE

IBM COMPATIBLE - SOFT SECTORED **

MECHANICAL FEATURES

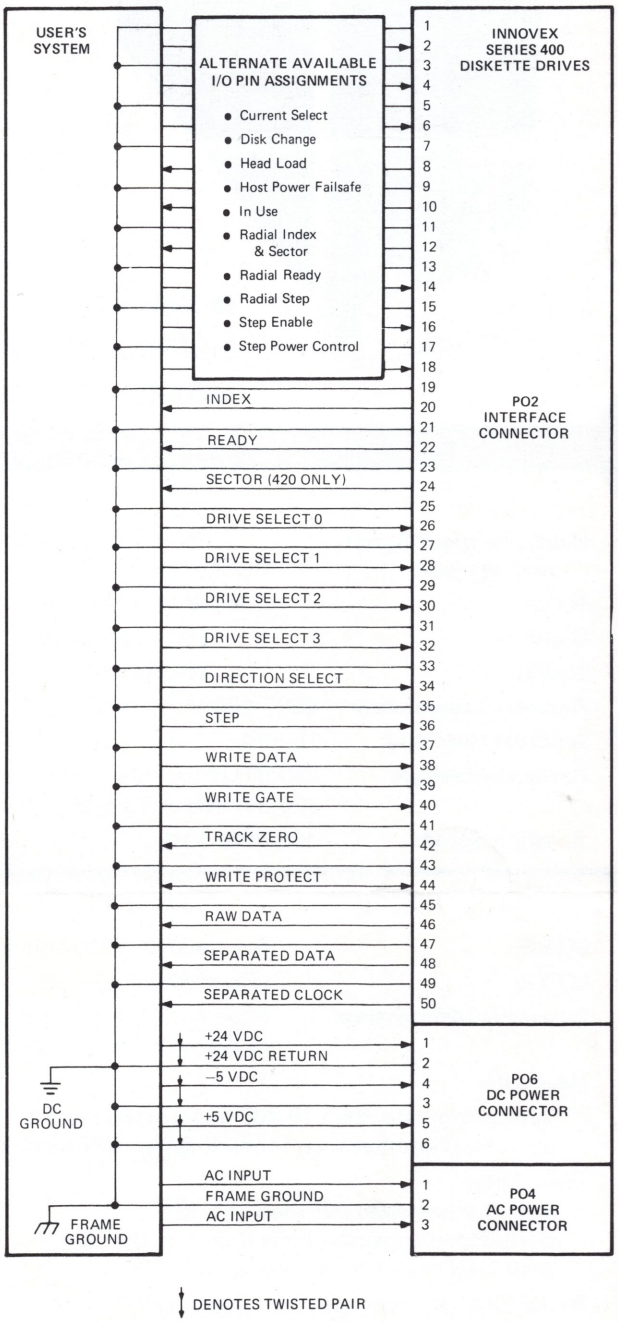
- **FILTERED AIR OPERATING ENVIRONMENT**
  Minimizes Contamination / Improves Reliability
- **SINGLE SIDE ACCESSIBILITY**
  Simplifies Installation & Maintenance
- **TARGETED MEDIA LOADING**
  Facilitates Diskette Insertion
- **MECHANICAL DOOR INTERLOCK***
  Insures Correct Diskette Loading
- **INTERLOCK OVERRIDE BUTTON***
  Permits Closing Door Without Power On Or Diskette Inserted
- **DOOR LOCK***
  Prevents Opening Door When In Use
- **6 POSSIBLE ACTIVITY INDICATORS***
  Head Loaded, Ready, Selected, In Use, Write Protected, And Diskette Load
- **FLEXIBLE MOUNTING CONFIGURATIONS**
  2 Horizontally Or 4 Vertically In Standard 19" Rack, Without Factory Adjustment. Multiple Bezel Configurations Available
- **PATENTED "WEAR-FREE" DISKETTE HUB**
  Media Life Tested To Over 100,000 Insertions

ELECTRICAL FEATURES

- **PROPRIETARY DATA SEPARATOR DESIGN**
  35% Greater Margin Than Closest Competitor
- **AUTOMATICALLY TIMED TUNNEL ERASE**
  Assures Greater Data Integrity
- **SINGLE AND DOUBLE DENSITY ABILITY**
  Due To High Resolution Head From A World Leader In Head Technology
- **SELECTABLE WRITE CURRENT***
  Assures True IBM Compatibility
- **AUTOMATIC HEAD UNLOAD TIME OUT***
  Minimizes Head & Media Wear
- **AUTOMATIC STEP DISABLE TIME OUT***
  Decreases Power Consumption
- **BINARY CODED DEVICE SELECT***
  Up To Eight Drives
- **HOST POWER FAILSAFE***
  Prevents Execution Of Erroneous Commands
- **3 POSSIBLE WRITE PROTECT CONFIGURATIONS***
  Hardware, Software, Or Operator Controlled

*OPTIONAL FEATURE

ELECTRICAL INTERFACE CONNECTIONS

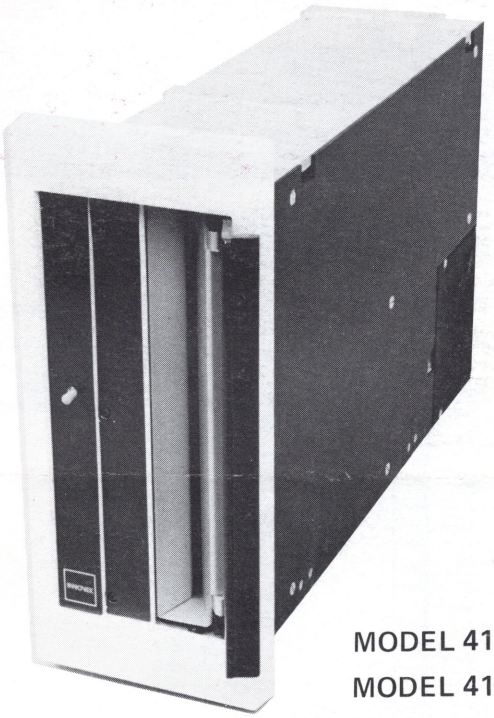


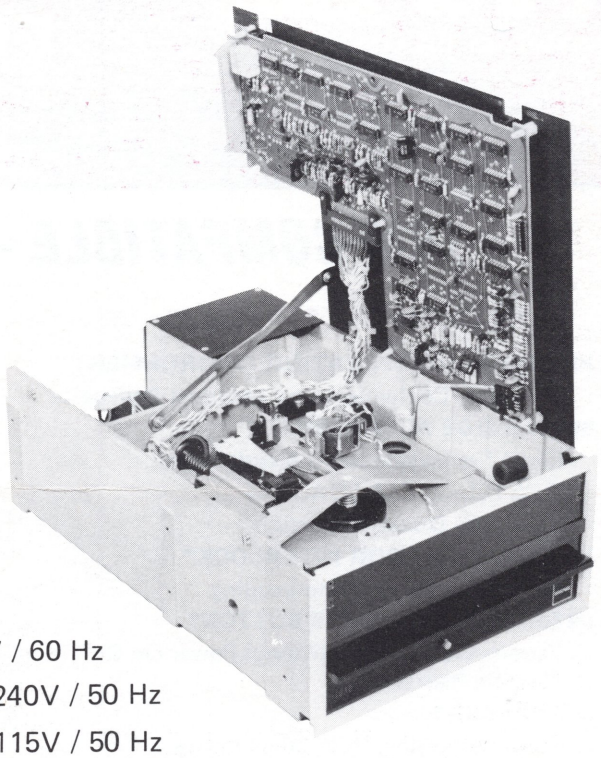
DENOTES TWISTED PAIR

- **RIBBON CABLE OR TWISTED PAIR COMPATIBLE**

** HARD SECTORED MODEL 420 IS AVAILABLE

TECHNICAL DATA





MODEL 410 – 115V / 60 Hz
MODEL 411 – 220/240V / 50 Hz
MODEL 412 – 100/115V / 50 Hz

Height (without Bezel):	9″ = 228.6 mm
Also available	8-13/16″ = 223.8 mm
Width:	4-3/8″ = 111.1 mm
Depth:	14″ = 335.6 mm
Weight:	14 pounds
Ambient Temperature:	50°F-100°F = 10°C- 38°C
Ambient Humidity:	18-80%
Power Dissipation:	230 BTU/Hour Maximum 120 BTU/Hour Typical
Rotation Speed:	360 RPM ±1%

MTBF:	Greater than 8500 hours
MTTR:	Under 30 minutes
Preventive Maintenance:	None required in office or computer environment

Head Life:
Typically greater than 15,000 hours under normal operating conditions, on Innovex approved Diskettes.

Error Rate:
Soft (Recoverable) less than 1 in 10^9
Hard (Non-recoverable) less than 1 in 10^{12} Est.
Seek - less than 1 in 10^6 seeks.

Media Life: (Innovex approved Diskettes)
Passes per track: 3.5×10^6
Insertions: 40,000 +

Input AC Power:	100-132 VAC, 60 Hz ±1 Hz, single phase @ 0.2 amps.
Input DC Power:	+5V ±0.25V @ 800 mA, −5V ±0.25V @ 75 mA, (option −12V, −15V) +24V ±2.0V @ 1.4A,
Recording Method:	Double Frequency

	Density	
Capacity (unformatted):	**Single**	**Double**
Bits Per Inch (Inner Track)	3,200	6,400
Bits Per Track	41.7×10^3	83.4×10^3
Bits Per Diskette	3.2×10^6	6.4×10^6

Density:	
Recording Density	13,262 Flux Reversals/Radian
Inner Track Radius	2.029-inches
Number of Tracks	77
Track Density	48 tracks/inch
Transfer Rate:	
Single Density	250,000 bits/sec.
Double Density	500,000 bits/sec.
Access Time:	
Track to Track (max.)	8 milliseconds
Settling Time (max.)	8 milliseconds
Latency (Average)	83 milliseconds
Head Load Time (max.)	30 milliseconds

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